

CLAIMS

1. A dehumidifying element comprising:

a superabsorbing polymer (SAP); and

a hygroscopic base.

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2. The dehumidifying element of claim 1, wherein the SAP is cross-linked.

3. The dehumidifying element of claim 1, wherein the SAP takes a 10 granular form, and is contacted to the hygroscopic base.

4. The dehumidifying element of claim 3, wherein a particle diameter of the granules is 1, 000 μm at a maximum.

15 5. The dehumidifying element of claim 1, wherein the SAP is formed in fibers or filaments.

6. The dehumidifying element of claim 1, wherein the SAP includes polymer and/or copolymer in which acryl acid or acrylamide is cross-linked, 20 propfpolymer of starch, cross-linked amyllum derivative, and/or cellulose derivative.

7. The dehumidifying element of claim 1, wherein the dehumidifying element is contained in a container through which gas can pass,

8. The dehumidifying element of claim 1, wherein the dehumidifying element is coated at a surface of a carrier.

9. The dehumidifying element of claim 1 or 8, wherein the carrier permits gas to penetrate.

10 10. The dehumidifying element of claim 9, wherein the dehumidifying element is further contained in the carrier.

11. The dehumidifying element of claim 9, wherein the dehumidifying element takes a granular form or a fibrous form.

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12. The dehumidifying element of claim 9, wherein the carrier is a dehumidifying element itself.

20 13. The dehumidifying element of claim 9, wherein the porous carrier is formed of textile, meshed textile, knitted fabric, knit, bonded fabric, or a combination therebetween.

14. The dehumidifying element of claim 9, wherein the carrier is fiber, filament, or a combination of fiber and filament.

15. The dehumidifying element of claim 9, wherein the fiber or 5 filament is natural polymer or composite polymer, or a combination of natural polymer and composite polymer.

16. The dehumidifying element of claim 9, wherein the carrier is fiber composite composed of natural fiber for carrying humidity and artificial fiber for 10 improving mechanical characteristics.

17. The dehumidifying element of claim 9, wherein the carrier is a sheet formed of a single layer or multi-layers.

15 18. The dehumidifying element of claim 9, wherein the sheet has a wave shape of a trapezoid, a sine wave, or a triangle.

19. A method for fabricating a dehumidifying element comprising:

20 selecting a salt solution;
drying a super absorbing polymer (SAP);
contacting the dried SAP with the salt solution; and

drying a hydrogel generated by the contact between the SAP and the salt solution.

20. The method of claim 19, wherein the salt solution is contacted
5 with the SAP in a state that the hydrogel is formed.

21. The method of claim 19, wherein the SAP is engaged to the carrier after the step of drying the SAP.

10 22. The method of claim 19, wherein the SAP takes a granular form.

23. The method of claim 22, wherein the granules are classified before contact with the salt solution.

15 24. The method of claim 22, wherein the granules are crushed and classified, if the granules are solidified after being dried.

25. A method for fabricating a dehumidifying element comprising:
engaging a SAP to a carrier;
drying the carrier to which the SAP is engaged;
selecting a salt solution;
contacting the carrier to which the SAP is engaged with the selected salt

solution; and

drying the carrier to which the SAP is engaged.

26. The method of claim 25, wherein the salt solution includes a
5 hygroscopic base concentration of 5~15wt%.

27. The method of claim 25, wherein the salt solution includes a
hygroscopic base concentration of 10wt%.

10 28. The method of claim 25, wherein water is used as solvent of the
salt solution.

29. The method of claim 25, wherein the SAP and the salt solution
are contacted to each other by soaking the salt solution into the carrier or
15 spraying.

30. The method of claim 25, wherein the carrier is fabricated in
multiple fabrication steps, and contacted to the salt solution during more than
two fabrication process steps.

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